# Flooding In Darien

# March 2, 2007

- Short Intense Event: approx. 3.5-4” rain over 4 hours
- Frozen Ground
- Some snow cover
- All watercourses flooded
- Homes evacuated
- Lives & commerce disrupted


Town Hall front


24
Cherry Street @ Ash


Renshaw Road


Hecker Ave


Hecker rear


PARKING DEPT.
373 RNZ
Leroy Ave.


SPEED
LIMIT
35
Boston Post Road


BPR @ BP Station


Goodwives Entrance


Mechanic Street


Goodwives Plaza


OKHN @ Goodwives Plaza


OKHN near Fuji restaurant


SPEED LIMIT
25
RADAR PATROLLED
OKHN @ Sedgwick


Koon's Lot


Andrews Drive


Depot Lot

# Stony Brook Characteristics


- Drains approx. 40% of Town
  - 3.91 sq. mi.
  - 2,502 acres
- Sixty years of flooding
- Frequently floods
- Rapid increase in water surface elevation
- Mostly private property

# Why does Stony Brook flood?

- “With a few exceptions, there is insufficient waterway capacity in the culverts along the entire lengths of Stony Brook and Goodwives River and their tributaries.”
- “In no case is sufficient waterway capacity available in existing stream channels between culverts.”
- “existing stream channels between culverts are capable of carrying only dry weather flows without overflowing banks.”

**Baffa Study conclusions**
**1957**

# Engineering Studies of Stony Brook

- 1957  Preliminary Report on Flood Control for Goodwives River and Stony Brook- John J. Baffa Consulting Engineer
- 1976 Stony Brook Hydraulic Study- Stearns and Wheler
- 1985 Stony Brook Flood Control Project BPR to Renshaw Road
- 1990 Stony Brook flood Control Project BPR to I-95

# 1976 Stearns & Wheler Study

- Channel Improvements along the majority of the brook from Gorham's Pond to RR.
- Culvert replacements at Relihan Road, Town Hall (done) and Maple Street.
- Bridge replacements at Renshaw Road, Noroton Ave (done) and Post Road (done)
- All improvements should be done from Gorham's Pond working upstream.

# Completed Projects

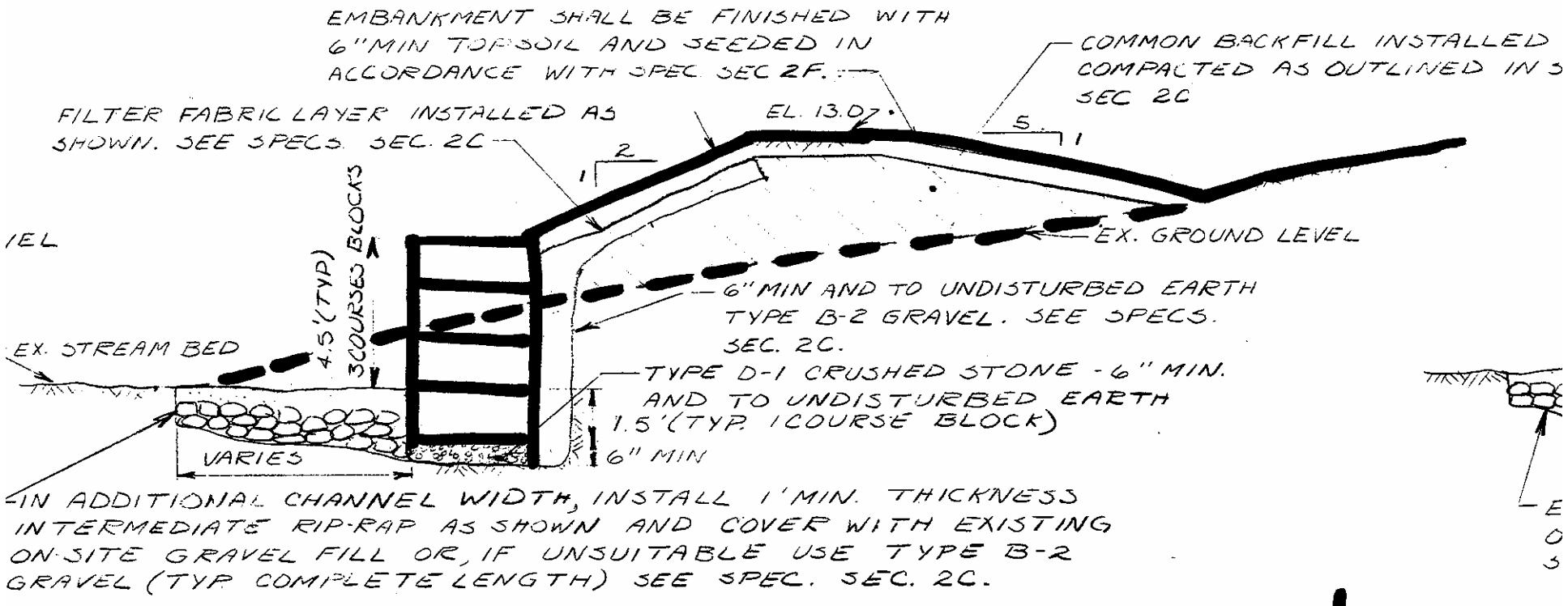
- 1978: Channel Improvements OKHS to Gorham's Pond
- 1980: Replacement of Route 1 Structure Over Stony Brook
- 2000: Replacement of Noroton Ave. bridge

# Public Hearing Replacement of B.P.R. Bridge 1980

- The bridge replacement is part of the town's plan to lessen periodic flooding in the area.
- The existing channel , upstream and downstream would be widened under another project by the Town.

# 1985 Channel Improvement

- Post Road bridge to Renshaw Rd– 650 ft
- Sections of reinforced concrete walls in combination with large precast block walls and earth berms.
- Bid out three separate times in 1985, 1986 and 1987.
- Project cancelled due to high cost - $770K




SECTION B-B

# CHANNEL IMPROVEMENT

# 1990 Flood Protection Project

- No construction in the channel.
- System of earth berms and one way drains to protect individual homes or small groups of homes.
- Preservation of flood storage areas
- Unable to secure necessary easements

# Attempts to Solicit Federal Funds

- “ a lack of economic justification precludes further studies for local flood protection along Stony Brook in Darien.” John M. Leslie, Chief, Engineering Division, Army corps of Engineers-March 1974

- Town contacted FEMA, USACE, Soil Conservation Service in 1988– no construction funds available

# What Do we Know?

- General nature and scope of projects
- Large capital investment
- Full cooperation of property owners
- Commitment from elected officials
- Need to use unpopular strategies

# Policy Considerations

- Change the character of Stony Brook and its tributaries
- Environmental impacts
- Costs of a comprehensive solution
- Use of condemnation powers
- Acquire and demolish flood-prone residences